AMENDMENTS TO THE CLAIMS:

Claim 1 – 13 (canceled):

Claim 14 (currently amended): A network configured to transfer data using time-division multiplexing comprising: ~~The network of claim 8, wherein the first wireless interface comprises~~:

a first wireless interface including

a physical layer interface ~~coupled to the cross connect switch,~~;

an optical transceiver coupled to the physical layer interface and configured to convert an outgoing data stream from an outgoing electrical signal to an outgoing optical signal,; and

a media abstraction unit coupled to the optical transceiver and configured to reframe the outgoing data stream from the outgoing optical signal to a second outgoing electrical signal suited for wireless transmission,.

a second wireless interface;

a first network node including the first wireless interface and a second wireless interface;

a cross connect switch coupled to the physical layer interface of the first wireless interface and the second wireless interface;

a second network node having a third wireless interface coupled to the first wireless interface of the first network node; and

a third network node coupled to the first network node and the second network node.

Claim 15 (currently amended): The network of claim 14, wherein the first wireless interface is configured to convert an incoming wireless signal to a first incoming electrical signal.

Claim 16 (original): The network of claim 14, wherein the media abstraction unit comprises a link quality management unit configured to adapt one or more parameters of the first wireless interface to provide more reliable data transmission.

Claim 17 (original): The network of claim 16, wherein the link quality management unit comprises a transmission power control unit.

Claim 18 (currently amended): The network of claim 17, wherein the transmission power control unit ~~1310~~ is configured to adapt a ~~the~~ transmission power of the first wireless interface ~~multi-medium network interface~~.

Claim 19 (original): The network of claim 18, wherein the link quality management unit comprises a modulation control unit.

Claim 20 (original): The network of claim 19, wherein the modulation control unit comprises a signal quality detector configured to measure a signal quality of an incoming data stream.

Claim 21 (currently amended): The network of claim 20, wherein the modulation control unit is configured to adapt a ~~the~~ modulation of an outgoing data stream.

Claim 22 (original): The network of claim 16, wherein the link quality management unit further comprises:

an error correction code encoding unit configured to add redundancy to an outgoing data stream; and

an ECC level control unit coupled to the error correction code encoding unit.

Claim 23 (original): The network of claim 22, wherein the ECC level control unit controls the amount of redundancy added by the error correction code encoding unit.

Claim 24 (currently amended): The network of claim 14, wherein the first wireless interface is part of a multi-medium network interface.

Claim 25 (currently amended): A network configured to transfer data using time division multiplexing comprising:

a first wireless interface including

a physical layer interface,

an optical transceiver coupled to the physical layer interface and configured to convert an outgoing data stream from an outgoing electrical signal to an outgoing optical signal, and

a media abstraction unit coupled to the optical transceiver and configured to reframe the outgoing data stream from the outgoing optical signal to a second outgoing electrical signal suited for wireless transmission;

a second wireless interface;

a first network node including the first wireless interface and a second wireless interface;

a cross connect switch coupled to the physical layer interface of the first wireless interface and the second wireless interface;

a second network node coupled to the first network node by a first link having a first bandwidth;

a third network node coupled to the second network node by a first wireless link having a second bandwidth;

wherein the first bandwidth is not equal to the second bandwidth.

Claim 26 (original): The network of claim 25, wherein the first link is an optical link.

Claim 27 (original): The network of claim 25, wherein the first wireless link is a free-space optics link.

Claim 28 (original): The network of claim 25, wherein the first wireless link is an RF wireless link.

Claim 29 (original): The network of claim 25, further comprising a fourth network node coupled to the third network node by a second link.

Claim 30 (original): The network node of claim 29, wherein the first link is an optical link and the second link is a wireless link.

Claim 31 (original): The network of claim 25, wherein data is transferred over the first link using a first protocol.

Claim 32 (original): The network of claim 31, wherein data is transferred over the first wireless link using a second protocol.

Claim 33 (original): The network of claim 25, wherein the first wireless link has a first bit error rate and the first link has a second bit error rate.

Claim 34 (new): The network of claim 14, wherein the third network node comprises a fourth wireless interface coupled to the second wireless interface of the first network node.

Claim 35 (new): The network of claim 34, wherein the third network node is coupled to the second network node using one or more optical fibers.

Claim 36 (new): The network of claim 34, further comprising a fourth network node coupled between the third network node and the first network node.

Claim 37 (new): The network of claim 34, wherein the first wireless interface is a radio frequency wireless interface.

Claim 38 (new): The network of claim 34, wherein the first wireless interface is a free-space optics wireless interface.

Claim 39 (new): The network of claim 34, wherein the network is also configured to transfer data using packets.

Claim 40 (new): The network node claim 34, wherein the first network node further comprises a TDM user interface coupled to the cross-connect switch and configured for data using time-division multiplexing.

Claim 41 (new): The network of claim 34, wherein the cross connect switch comprises:

a first TDM Framer/Deframer coupled to the first wireless interface and configured to deframe a first TDM frame from the first wireless interface; and

a second TDM Framer/Deframer coupled to the a second wireless interface and configured to form a second TDM data frame.

Claim 42 (new): The network of claim 34wherein the cross connect unit is a Packet/TDM cross connect unit configured to process TDM data and packet data.

Claim 43 (new): The network of claim 42, wherein the first network node further comprises a packet user interface coupled to the cross-connect switch and configured for packet based data.

Claim 44 (new): The network of claim 43, wherein the Packet/TDM cross connect unit further comprises:

a packet switch coupled to the packet user interface; and

a TDM cross connect coupled to the TDM user interface.